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on closely related mosses, particularly in the *Hydnaceae*. To sum up, I vote for *irriguum* because your plant has the habit, the leaf form and structure, and paraphyllia of *irriguum* rather than of *filicinum*. I believe these outweigh the contiguity of the forms and the inflorescence."

I have sent what I have of the variety to Dr. Grout for his Series of N. A. Musci Pleurocarpi, and shall accept his diagnosis; still the interesting question remains to be answered; how does it happen that *everyone of a number of mats of Amb. filicinum*, growing at the water's edge, is *continued below the water by Amb. irriguum var. spinifolium*, while a mat of *Entodon seductrix* growing in like situation on the wall of the same spring is not thus accompanied by the variety, nor could I find the variety growing independently of *filicinum*?

DAYTON, OHIO, 17 Jan., 1914.

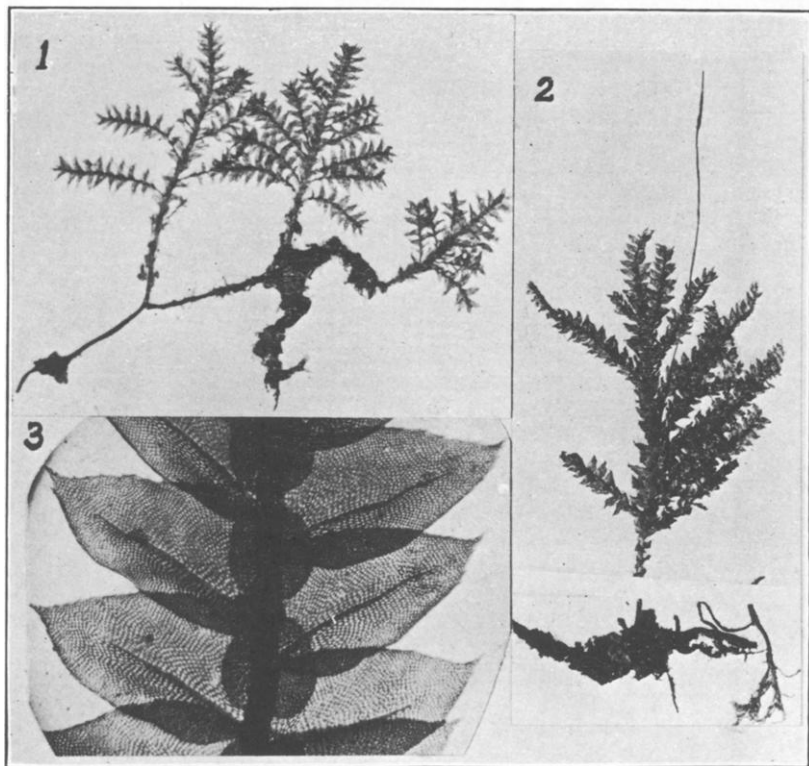
HYPOPTERYGIUM JAPONICUM IN NORTH AMERICA

JOHN M. HOLZINGER

Professor A. S. Foster recently sent me a *Hypopterygium* collected by him "on rocks among boulders, at Egg Harbor, Coronation Island, southeastern Alaska, July 24, 1913". This moss was collected at the same place also by Dr. Frye. On examination, I found it to agree perfectly with *Hypopterygium japonicum* Mitt., sent me by Prof. H. Nakanashiki from two stations, and by Prof. Shutai Okamura from two other stations, all in Japan. Both these moss students had their plants determined by Dr. V. F. Brotherus, and both sent fruiting plants. The Egg Harbor plants are not fruiting, but show quite a few archegonial buds. On careful comparison of branch leaves, of ventral bracts, and of perichaetial leaves there is left no doubt about the identity of the Alaskan with the Japanese species. Several of the Japanese specimens are more luxuriant, and part of them show rather scant brown felt, which is quite pronounced on the Alaskan plants.

On submitting my findings to Mrs. Britton, she very kindly sent me a bit of the type of *Hypopterygium japonicum* Mitt., informing me at the same time that Prof. Foster had sent some of his plant to the New York Botanical Garden, and that both she and Mr. R. S. Williams had referred this to *H. canadense*. A comparison with Mitten's type still further strengthened my conviction that the Alaska plant is indeed *H. japonicum*.

Then the question arose: Is Dr. Kindberg's type really different, and a distinct species? Mrs. Britton here also kindly came to my assistance, and loaned me her material of *H. canadense* Kindb., comm. J. Macoun, as "type," and therefore, by inference (the label does not state locality) the very plant collected by Newcombe on Queen Charlotte Island off the coast of British Columbia in 1898, and communicated to Dr. Kindberg by Mr. John Macoun, the Botanist of the Dominion of Canada. The few plants in this pocket are somewhat smaller, and rather battered, but enable perfectly comparison of the several



HYPOPTERYGIUM JAPONICUM MITTEN

Fig. 1. Plant collected by A. S. Foster at Egg Harbor, Coronation Island, S. E. Alaska, July 24, 1913. x 2.

Fig. 2. Plant collected by Shutai Okamura on the island of Yoki, Tosa, Japan, Jan. 30, 1904. x 2.

Fig. 3. Branch from Foster's plant, showing the small ventral leaves called amphigastria. x 8.

forms of leaves: this comparison leaves no shadow of doubt as to the identity of the Canadian with the Alaskan and Japanese plant. And *Hypopterygium canadense* Kindb. becomes a synonym of *Hypopterygium japonicum* Mitt.

Dr. Kindberg published *H. canadense* in Rev. Bryol. 28: 46-48, 1899. A study of this article reveals the ground of error. Plainly, *Hypopterygium* being a tropical genus both of the Western and Eastern Hemisphere, and Canada being in the Western, the search for its allies was made by Dr. Kindberg among American *Hypopterygia*. For he enumerates fifteen species, with jottings of individual differences under each: being satisfied that it differs from each of them, and quite correctly so, he concludes to "signalize" it as a new species, quite remarkably out of its range. But here comes a new station, on Coronation Island, S. E. Alaska, several hundred miles farther north than Queen Charlotte Island, making still more questionable the association of this species of *Hypopterygium* with the American aggregation. This great extension into a far northerly region—upward of 55° N. lat. (the exact latitude of Egg Harbor is at this writing not obtainable)—is explainable only by considering the Kuro Siwo, or Japan Stream, in connection with it. This great natural phenomenon, corresponding in the Pacific Ocean to the Gulf Stream in the Atlantic, like the latter carries the heat poured by the sun on the Equatorial Current into high northern latitudes. The Pacific Stream takes its English name from the fact that in its onward course it sweeps by the Japanese Archipelago, northward past the shallow Bering Sea, and thence southeast and past our Northwest Coasts. This, it seems to me, is the explanation of the occurrence of *Hypopterygium japonicum* in the two out-of-the-way stations. Our two great marine currents (as well as our Southern Hemisphere currents) are to be reckoned with as dynamic forces for the distribution of organisms, both plant and animal.

NOTE: Previous writers have used the term *amphigastrium*, n. (pl. *amphigastria*) for the small median leaves, a term introduced for them in Linnaea 20: 95, by Hampe, and kept by Brotherus in Nat. Pflzf. 1: 3: 964. The plants of this genus have *flat* branches, with distichous, inequilateral leaves, to which is added a third row of smaller, symmetrical leaves closely pressed to the axis of the branch, a provision which seems to facilitate the retention of moisture. These are the innocent victims of our classical passion for long names, here, as usual, in the inverse ratio to their size. Why is it not sufficient to call them "ventral bracts" or "ventral leaves"? See PLATE IX.

A NEW REINKELLA FROM MEXICO,—REINKELLA PARISHII HASSE

H. E. HASSE

During October, 1913, Mr. S. B. Parish, in a flying trip to the Coronados Islands off the coast of Lower California, collected among several other interesting Lichens one that was referred to Dr. Zahlbruckner for determination, concerning which he replies: "In habit it approaches *Roccellographa* so closely that a sterile specimen could not be distinguished from that genus. The apothecia